

FOUR NEW SPECIES OF ISOPODS FROM THE COAST OF CALIFORNIA.

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The specimens of the new species here described were collected on the coast of California by Dr. S. J. Holmes and sent to the U. S. National Museum.

ANCINUS GRANULATUS, new species.

Body very broad and much depressed, contractile, evenly and densely granulated. Thorax with parallel sides. Head twice as broad as long; front produced into a rectangular lobe between the bases of the antennules; a small lobe on the anterior margin on either side of the median one. Eyes small and round.

Antennæ nearly equal in length; the flagellum of the first somewhat longer than the peduncle and composed of about 10 joints. Second antennæ with the flagellum about 10-jointed and longer than the peduncle; both furnished with setæ having a brush of radiating hairs at the tip.

Mandibles with the palp situated behind the middle, the last two joints furnished on the distal part of the outer margin with setose spines, those of the last joint increasing in length toward the tip. Palp of the maxillipeds with the first joint very short, the second and third joints as wide as long and produced into a rounded setose lobe on the inner margin; fourth joint produced at the distal end of the inner margin into a rounded setose lobe; last joint oblong, distally rounded and setose, and about three-fourths the length of the preceding one.

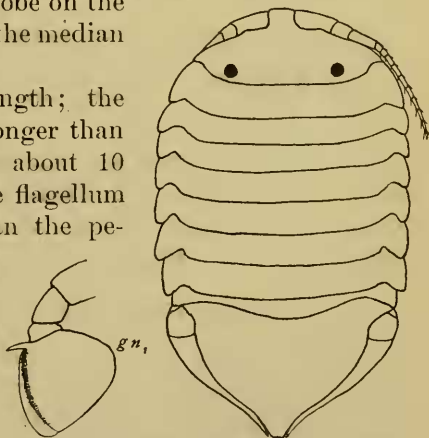


FIG. 1.—ANCINUS GRANULATUS; *gn*₁, FIRST GNATHOPOD.

First pair of legs with a broad hand having a very convex anterior margin; palm comprising nearly all the posterior margin of the hand, evenly curved, and furnished with a long spine at the upper end. The following legs increasing in length posteriorly and furnished on the margins with long spines and fine cilia.

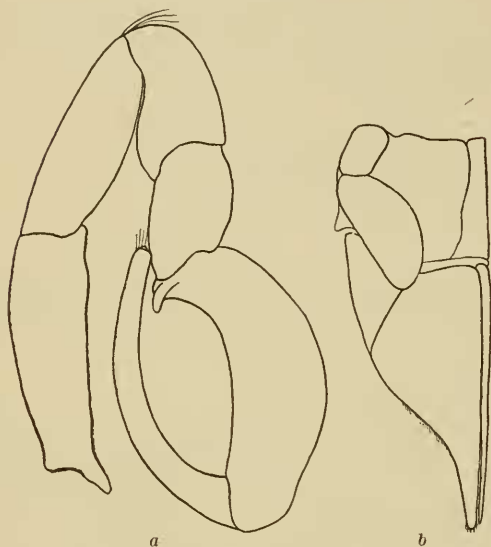


FIG 2.—*ANCINUS GRANULATUS*; a, SECOND LEG; b, SECOND PLEPOD OF THE MALE. THESE FIGURES, WHICH WERE KINDLY SUPPLIED BY MISS H. RICHARDSON, ARE DRAWN TO A LARGER SCALE THAN THE PRECEDING ONES.

First abdominal segment very short. Terminal segment triangular with slightly sinuous margins, the tip narrowly rounded when seen from above, but having a deep notch on the lower side. Uropods with a single movable, styliform ramus, which nearly or quite reaches the tip of the abdomen.

Length, 8 mm.

Locality.—Near Coronado Island, California, from a depth of 3 fathoms.

Type.—Cat. No. 39046, U.S.N.M.

This is the only species of the genus known to occur on the Pacific coast. It is broader and flatter than *Ancinus depressus* Say of the coast of New Jersey and has a more broadly triangular terminal segment of the abdomen.

TYLOS PUNCTATUS, new species.

Oblong, covered with scattered short spines or acute granulations. Eyes nearly round. First antennae single jointed, scale like. Second antennae less than one-fifth the length of the body, not reaching the middle of the first thoracic segment: a hook-like process on the second joint of the peduncle; third joint nearly as long as the two preceding; flagellum slightly longer than the last joint of the peduncle, the third joint nearly as long as the two preceding; fourth joint short, conical, and furnished with numerous setae at its distal end. Lateral lobes of the head with two triangular projections in front of the eyes.

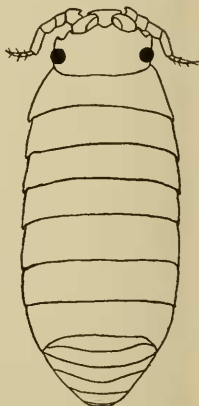


FIG. 3.—*TYLOS PUNCTATUS*.

Thoracic segments subequal, the epimera in all produced backward and rounded at the posterior angle. Legs very spiny, the terminal part of the claw marked off by an apparent suture from the longer basal portion; first pair of legs with an acute lobe near the distal end of the anterior margin of the second joint; fourth joint produced and rounded in front.

Third abdominal segment and to a less extent the fourth produced backward at the outer posterior angle; lateral process of fifth segment small. Last segment truncated and four or five times as broad as long. Uropods nearly semicircular in outline, armed with a few scattered spines, the small terminal joint furnished with a few spines and several setae.

Length, 10 mm.

Locality.—San Diego, California, in sand near the beach.

Type.—Cat. No. 39047, U.S.N.M.

No other representative of the family Tyliidae is known from the west coast of North America.

ACTONISCUS TUBERCULATUS, new species.

Body elliptical in outline and furnished with small tubercles. Head deeply inserted, with an acute median lobe and prominent rounded lateral ones. Eyes oval. Antennae not one-third the length of the body, the second joint of the peduncle a little longer than the third and about twice the length of the first; fourth joint longer than the third but not quite so long as the fifth; flagellum with four evident joints and a minute terminal fifth joint. The peduncle is bent between the second and third, and the fourth and fifth joints.

Maxillipeds with a rounded setose inner lobe; palp short and broad, the first joint much wider than long, the second triangular with slightly lobulated inner margin, the tip with a brush of long setae.

Legs similar, spiny, a long ciliated spine on the lower margin of the fifth joint.

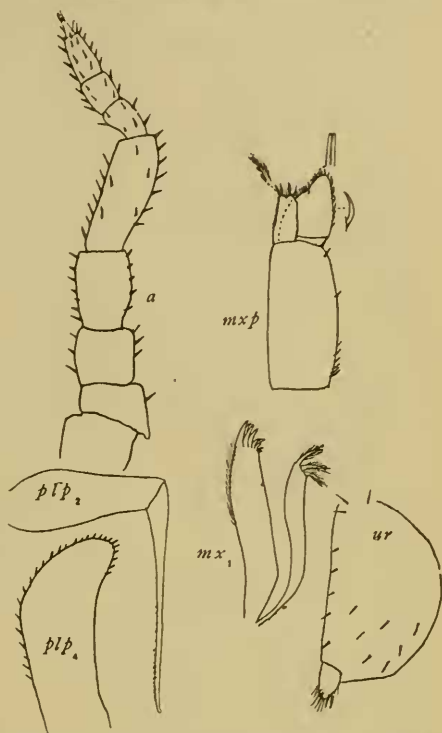


FIG. 4.—*TYLOS PUNCTATUS*; *a*, ANTENNA; *mx*₁, FIRST MAXILLA; *mxp*, MAXILLIPED; *plp*₂, SECOND PLEPOD OF THE MALE; *plp*₄, FOURTH PLEPOD; *ur*, UROPOD.

Basal joint of uropods large, similar to the coxal plates of the preceding segments, and setose on the distal margin; rami extending about to the tip of the peduncle, the outer one inserted at the middle of the inner margin of the basal plate, the inner one near the base; both tipped with setæ.

Length, 3.25 mm.

Locality.—San Diego, California, on moist ground near the seashore.

Type.—Cat. No. 39048, U.S.N.M.

This species seems to be closely allied to *Actoniscus ellipticus* Harger from the Atlantic coast. The body is somewhat broader and the lateral processes of the segments are more nearly rectangular in outline, especially in the abdomen, and more prominent.

PHILOSCIA RICHARDSONÆ, new species.

FIG. 5.—*ACTONISCUS TUBERCULATUS*.

Body oblong-oval, covered with short minute spinules. Head twice as wide as long; frontal margin arched; lateral angles subacute. First thoracic segment longer than the following ones, the last three segments produced backwards at the lateral angles. Antennæ about one-half as long as the body, the last joint of the peduncle about as long as the third and fourth; flagellum triarticulate, nearly as long as the fifth joint of the peduncle, the first and third joints subequal and a little longer than the second; last joint ending in a spine.

Legs similar, increasing gradually in length from before backwards, and very spiny.

Abdomen abruptly much narrower than the thorax, the lateral angles of the third, fourth, and fifth segments produced backwards;

last segment over twice as broad as long, with the posterior margin concave on either side of the narrowly rounded tip. Basal joint of

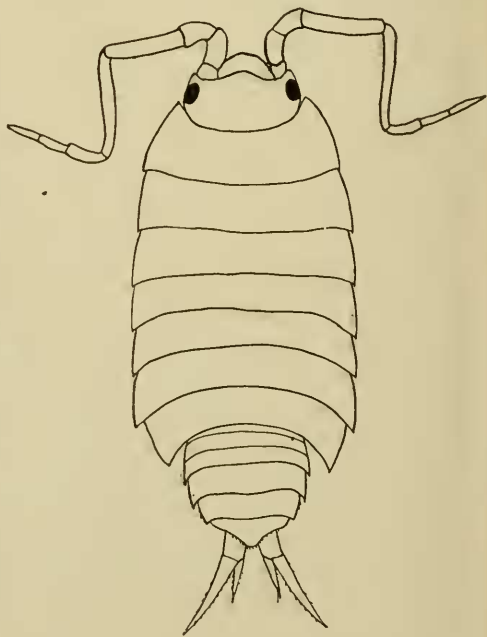


FIG. 6.—*PHILOSCIA RICHARDSONÆ*.

the uropods about as broad as long; outer ramus slender, acuminate, subconical, with the outer margin nearly straight and the inner one somewhat convex; inner ramus about one-third the length of the outer, subconical, with narrow blunt tip which is armed with one or more sharp spines; scattered short spines occur on both rami.

Length, 5 mm.

Locality.—San Diego, California, on moist swampy ground.

Type.—Cat. No. 39049, U.S.N.M.

Named after Miss Harriet Richardson, who has contributed so much to our knowledge of the North American Isopoda.